



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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OFFICE OF
ENVIRONMENTAL
CLEANUP

November 27, 2018

Mr. Marc Connally
92 CES/CEVR
100 West Ent Street, Suite 155
Fairchild AFB, Washington 99011

Re: Site Inspection of Aqueous Film Forming Foam (AFFF) Release Areas. Fairchild Air Force Base, Washington. Working Copy (Revision 1)

Dear Mr. Connally:

Thank you for the opportunity to review and comment on the Draft Site Inspection Report of AFFF Release Areas at Fairchild Air Force Base. We agree with the general conclusions of the document and the decision to proceed with a Remedial Investigation for the release areas. The report would be more informative by providing a map showing all the Release Areas relative to the base boundaries along with the results of groundwater and soil monitoring (color coded?). It would also help to include other on-base groundwater monitoring data that is available. Together, this would provide a more complete picture for evaluating potential receptor pathways with immediate impacts to human health (Objective 4 of the SI) and help to prioritize subsequent remedial investigations. Assuming Fairchild AFB plans to commence with the RI in the very near future, this could be provided as part of the workplan. Other comments for your consideration are presented below:

- 1) In Table 1-1.1, please clarify in Footnote b that the calculated RSL values are based on a Target Hazard Quotient of 0.1, consistent with USAF Guidance (USAF 2018). Previous text also discusses a calculated RSL value of 1.26 mg/kg (presumably using THQ of 1).
- 2) The soil analyses are listed as "modified" Method 537; but the report does not describe how the method is modified. Method 537 is a drinking water method and consists of adding surrogates to a water sample, extracting those and any target compound using a polystyrenedivinylbenzene resin, and then extracting from that with methanol, evaporated to dryness, and then put back into solution using a mostly methanol mixture with some water. The solution then enters the LC column. Our understanding is that the laboratory is permitted to modify the evaporation technique, separation technique, LC column, mobile phase composition, LC conditions, and MS and MS/MS conditions. Changes may not be made to sample collection and preservation, the sample extraction steps, or to the quality control requirements. Since soil is a solid matrix, there must be an additional extraction step to get the PFAS compound into a liquid phase to be extracted by the resin. It would be helpful to have some description of that process, and the associated documentation demonstrating the results are reliable. Perhaps this description and documentation is provided in Appendix C (electronic) which was not provided.
- 3) The data validation section notes that B flags are applied when the target concentration exceeds a concentration in a blank by a factor of 10, citing the 2014 National Functional Guidelines. Since these guidelines were revised in 2016, it is not clear the B flag exists anymore; there are now provisions for using professional judgement to validate data where blank contamination is observed. In addition, as a non SW846 method, 537 already has its own data validation procedure. We recommend using the updated guidelines going forward.

- 4) Please show on the maps the specific location of the on-base Supply Well No. 2 since the report indicates it is used periodically. The report mentions that the base drinking water supply has been tested for PFOS and PFOA and results indicate concentrations less than the Health Affect (HA) value. Does this include testing of the Well No. 2? What are the concentrations in that well?
- 5) While not part of this specific investigation, we agree with the note that surface water and sediment from No Name Creek and the stormwater retention pond on the eastern side of the base south of the runway present a potential exposure pathway with sediment and/or surface water at these features.
- 6) At Release Area 5, it is curious that groundwater was encountered at approximately 3 feet below ground surface at boring FRCHD05-SB-2 and at approximately 13 feet bgs at boring FRCHD05-SB-1 near the Fire Station 1, yet these borings are relatively close to each other (100 feet or so). Please provide some explanation for this discrepancy. Additional data points and a cross-section would improve the conceptual site model for this area.
- 7) The report concludes that “it is unlikely that occupational workers will come in contact with surface soil at Areas 2, 4, and 5 because surface soil is covered with pavement, clean soil, or vegetation in these areas.” From the photos, it appears that the vegetation cover in some of these areas (2 and 4) is sparse, or at least repressed during the winter months.

Thanks again for the opportunity to review. If you have any questions, please contact me at prestbo.kim@epa.gov or 206-553-0239.

Sincerely,

Kimberly M. Prestbo
Remedial Project Manager
Office of Environmental Cleanup

cc: Kurt Lee - AFCEC
Hun Seak Park – Washington Department of Ecology